

REMARKS/ARGUMENTS

Claims 1, 3-6, 8-10, 12, 13, 15-18, and 24-27 are pending. Claims 1, 3, 6, 8, 9, 13, 15, and 24 have been amended. Claims 2, 7, and 10 have been canceled and substantially all of the limitations of claim 2 have been amended into claim 1, substantially all of the limitations of claim 7 have been amended into claim 6, and substantially all of the limitations of claim 10 have been amended into claim 9. All of the amended claims are fully supported by the specification and no new matter has been introduced by this amendment.

Claims 1, 4, and 6 were rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent Application Publication Number 2005/0114438 issued to Justin Russell Bendich et al. (hereinafter "Bendich").

Claims 2-3 and 7-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in further view of U.S. Patent Number 6,687,651 issued to Mark A. W. Stewart (hereinafter "Stewart").

Claims 5, 9, 13 and 24-25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in further view of U.S. Patent Application Publication Number 2004/0098606 issued to Yih-Shin Tan et al. (hereinafter "Tan").

Claims 10, 12, and 16-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in view of Tan and further in view of Stewart.

Claims 15, 26, and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in view of Tan and further in view of U.S. Patent Application Publication Number 2005/0018619 issued to David Banks et al. (hereinafter "Banks").

Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in view Tan and in view of Stewart and further in view of Banks.

An interview was conducted with the examiner on December 19, 2006. Proposed claims were discussed. The undersigned would like to thank the examiner for his suggestions for further clarification in the claims. No agreement was reached, however.

The claims have been amended to more clearly distinguish over the cited art. Reconsideration of the claims in view of the amendments and the following remarks is respectfully requested.

Claims 1, 4, and 6

Claims 1, 4, and 6 were rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Bendich.

Applicants have amended independent claims 1 and 6, and Applicants respectfully submit that Bendich fails to disclose or suggest at least each element of independent claims 1 and 6. For example, independent claim 1 recites a storage method in a networked data processing system comprising one or more host servers, a switching component, and a data storage component, the storage method comprising:

- receiving a user-originated request for data storage, the request including a service policy, the service policy comprising a server sub-policy, a network sub-policy, and a storage sub-policy which is associated with one or more data storage performance criteria;

- identifying a server service component based on the server sub-policy;

- identifying a data store from among a pool of data stores defined in the data storage component, wherein the identifying of the data store from among the pool of data stores includes selecting a data store having performance characteristics that meet or exceed the one or more performance criteria associated with the storage sub-policy;

- identifying a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port;

communicating with a data storage agent to establish a data path within the data storage component for data communication between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component;

based on the network sub-policy, identifying a network path for data communication between the server service component and the port, wherein the network sub-policy includes one or more network path criteria for selecting a network path from a set of one or more network paths based upon one or more network attributes; and

communicating with a network agent to allocate the network path identified based upon the network sub-policy, the network agent being one of a plurality of network agents that manage portions of the network storage component.

Bendich discloses an apparatus, system and method for provisioning storage resources according to a modeling policy. A monitoring module monitors storage resources on the storage system, and a policy modules stores and maintains storage management, storage provisioning, and storage resource modeling policies. Bendich, Abstract.

The Office Action relies upon Bendich to suggest or disclose each element of the invention recited in claim 1. However, Applicants have amended claim 1, and Applicants respectfully submit that Bendich fails to disclose or suggest at least “identifying a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port” as recited in amended claim 1. Applicants have amended this limitation of claim 1 to more particularly describe the selection criteria used by the rule when selecting a port on the data store. The rule uses a bandwidth metric for characterizing each of the plurality of ports on the storage system. The bandwidth metric for each port is determined from a port priority and a total bandwidth of each port. The port priority of the port determines the priority of a network

transferred to the port. Applicants' specification as filed, paragraphs 25, 55; and Fig. 17B. The total bandwidth for the port describes the data rate or throughput capacity of the port.

Applicants' specification as filed, paragraph 34 and Fig. 6, reference no. 604.

Applicants submit that Bendich is silent as to characterizing a port using a bandwidth metric determined from a port priority and a total bandwidth for the port as recited in claim 1. Accordingly, Applicants submit that independent claim 1 is allowable as Bendich fails to disclose or suggest at least each of the features recited in independent claim 1.

Independent claim 6 has been amended to include similar limitations as claim 1, and should be allowable for at least the same rationale as claim 1. Furthermore, dependent claim 4 should also be allowable at least due to its dependence from independent claim 1.

Claims 2, 3, 7, and 8

Claims 2-3 and 7-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in further view of Stewart.

Stewart discloses an apparatus and method for generating via integer calculations a metric for estimating link utilization with a network device having at least one output port. The metric is determined by calculating at least three data rate link parameters for a given sample period. The data rate link parameters include an error data rate parameter, an average data rate parameter, and a deviation data rate parameter. These parameters are determined using integer values and integer operations and may be used by a link management system for performing load balancing among a plurality of output ports and for determining whether to forward low priority data traffic via a particular output port. Stewart, Abstract.

Applicants have canceled claims 2 and 7 and have amended substantially all of the limitations of claim 2 into claim 1 and substantially all of the limitations of claim 7 into claim 6. Accordingly, Applicants have considered independent claims 1 and 6 in light of the combination of Bendich and Stewart, and Applicants submit that amended independent claims 1 and 6 are not obvious in light of the combined references.

The Office Action relies upon Bendich to suggest or disclose the features recited in the base claims 1 and 6 and relies upon Stewart to disclose the remaining features of

dependent claims 2, 3, 7 and 8. As described above, Bendich fails to suggest or disclose at least each of the features recited in independent claims 1 and 6. For example, Applicants submit Bendich fails to disclose or suggest at least “identifying a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port” as recited in amended claim 1.

Stewart similarly fails to disclose or suggest at least this limitation of claim 1. Stewart describes calculating a bandwidth metric for a port, but the bandwidth metric described in Stewart is calculated from an error data rate parameter, an average data rate parameter, and a deviation data rate parameter. The bandwidth metric disclosed in Stewart does not include a port priority and a total bandwidth for the port as recited in amended claim 1. Therefore, Bendich and Stewart, either alone or in combination, fail to disclose or suggest at least each element of independent claim 1, and thus, claim 1 is allowable over Bendich and Stewart.

Furthermore, independent claim 6 includes a limitation similar to that included in independent claim 1, and thus, should also be allowable over the combination of Bendich and Stewart. Accordingly, dependent claims 3 and 8 should also be allowable over the combination of Bendich and Stewart at least due to their dependence from independent claims 1 and 6.

Claims 5, 9, 13, 24 and 25

Claims 5, 9, 13, 24 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in further view of Tan.

Tan discloses receiving a user-issued request for service and validating the request for services based upon a service policy. Once the request for service is validated, an initial set of services providers from a grid are identified. Once identified, the set can be dynamically varied based on monitored performances of the service providers, and/or based on the discovery of other service providers from other grids. Once the set is finalized, one or more particular service providers are selected to process the request. This system allows the grid to

automatically respond to events monitored to optimize and provide reliable operations. Tan,
Abstract.

With respect to dependent claim 5, the Office Action relies upon Bendich to disclose or suggest each of the features recited in the base claim 1 and relies upon Tan to disclose or suggest the remaining features recited in dependent claim 5. As described above, Bendich fails to disclose or suggest at least each element of independent claim 1. For example, Bendich fails to disclose as least "identifying a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port" as recited in claim 1. Tan similarly fails to disclose or suggest at least this limitation of independent claim 1 as well. Therefore, independent claim 1 is not obvious in light of Bendich and Tan, either alone or in combination, and thus, dependent claim 5 is also not obvious in light of Bendich and Tan at least due to its dependence from claim 1.

Furthermore, claims 9, 13 and 24 are independent claims that include limitations similar to those of claim 1. Therefore, claims 9, 13, and 24 should be allowable for at least the same rationale as claim 1. Moreover, claim 25 depends from claim 24, and thus, should also be allowable at least due to its dependence from claim 24.

Claims 10, 12, 16 and 17

Claims 10, 12, 16 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in view of Tan and further in view of Stewart.

Claims 10 and 12 depend from claim 9, and claims 16 and 17 depend from claim 13. The Office Action relies upon the combination of Bendich and Tan to disclose or suggest each of the features recited in independent claims 9 and 13, and relies upon Stewart to disclose or suggest the remaining features recited in dependent claims 10, 12, 16 and 18. As described above, Bendich fails to disclose or suggest at least each element of independent claims 9 and 13.

For example, Bendich fails to disclose as least "the data storage agent identifies a port on the data store by applying a rule to the one or more data storage performance criteria,

wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port" as recited in claim 9. Claim 13 also includes a similar limitation.

As described above, neither Tan nor Stewart, either alone or in combination with Bendich, suggest or disclose at least this limitation of independent claims 9 and 13. Accordingly, the combination of Bendich, Tan, and Stewart also fails to suggest or disclose each element of claims 9 and 16. Therefore, dependent claims 10, 12, 16 and 18 are also not obvious in light of the combination of Bendich, Tan, and Stewart at least due to their dependence from claims 9 and 13. As such, Applicants respectfully request that the rejection of claims 10, 12, 16 and 18 be withdrawn.

Claims 15, 26, and 27

Claims 15, 26, and 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in view of Tan and further in view of Banks.

Banks discloses a system comprising a first fabric and a plurality of devices coupled to the fabric by Fibre Channel connections, the devices are logically grouped to form configurations and zones. A configuration includes at least one zone, and each zone includes at least one device as a member of the zone. Communications between the devices is restricted according to the configuration currently in effect. For example, one device may be permitted to communicate with another device only if they are members of a common zone. Banks, Abstract.

Claim 15 depends from independent claim 13 and claims 26 and 27 depend from independent claim 24. The Office Action relies upon the combination of Bendich and Tan to disclose or suggest each of the features recited in independent claims 13 and 24, and relies upon Banks to disclose or suggest the remaining limitations recited in dependent claims 15, 26, and 27.

As described above, the combination of Bendich and Tan fails to suggest or disclose at least "the data storage agent identifies a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port

being determined from a port priority and a total bandwidth of each port" as recited in claim 13. Claim 24 includes a similar limitation. Banks similarly fails to suggest or disclose at least this limitation as Banks is silent as to using a bandwidth metric for characterizing a port as recited in claims 13 and 24. Therefore, independent claims 13 and 24 are not obvious in light of Bendich, Tan, and Banks, either alone or in combination.

Accordingly, dependent claims 15, 26, and 27 should also be allowable over the combination of Bendich, Tan, and Banks at least due to their dependence from independent claims 13 and 24. Therefore, Applicants respectfully request that the rejection of claims 15, 26, and 27 be withdrawn.

Claim 18

Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Bendich in view Tan and in view of Stewart and further in view of Banks.

Claim 18 depends from independent claim 13. The Office Action relies upon the combination of Bendich, Tan, and Stewart to disclose or suggest each of the features recited in base claim 13, and relies upon Banks to disclose or suggest the remaining features recited in dependent claim 18. As described above, the combination of Bendich, Tan, and Stewart fail to disclose or suggest each of the elements of independent claim 13. For example, Bendich, Tan, and Stewart, either alone or in combination, fail to disclose at least at least "the data storage agent identifies a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port" as recited in claim 13. Similarly, Banks also fails to disclose or suggest at least this limitation of claim 13. Banks is silent as to using a bandwidth metric for characterizing a port as recited in claim 13. Therefore, the combination of Bendich, Tan, Stewart, and Banks also fails to disclose or suggest at least each element of independent claim 13.

Accordingly, Applicants submit that dependent claim 18 is not obvious in light of the combination of Bendich, Tan, Stewart, and Banks at least due to claim 18's dependence from independent claim 13.

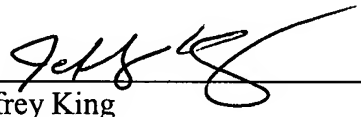
CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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